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EXAMINER

HANCE, ROBERT J

ART UNIT	PAPER NUMBER
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2421

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/759,307	Applicant(s) CHOI, MI AE	
	Examiner ROBERT HANCE	Art Unit 2421	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/17/2008 has been entered.

As per Examiner's telephone conversation with Michael Monaco, claim 1, line 4 will be examined to read "an updated Download Server Initiate control message" rather than "the Download Server Initiate control message".

Response to Arguments

2. Applicant's arguments filed 12/17/2008 have been fully considered but they are not persuasive.

Applicant argues on page 12 of the Remarks that Tsutsui fails to disclose updating the DSI data in response to historical searches. While this is true, Examiner asserts that Christopher was relied upon to teach this limitation. See previous rejection of claim 1. The history file (and the DSI in the combined system of Christopher and Tsutsui) is updated in response to historical searches, and when the file is searched

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again, it is searched from the updated root directory when it is confirmed that the history file is updated.

Applicant argues on pages 12-13 of the Remarks that “the use of caching for rapid opening of files is not equivalent to or related to “the claimed invention. Examiner respectfully disagrees. As stated by Applicant on page 12 of the Remarks, Christopher describes maintaining a history of file usages which allows fast access of previously searched files without the need for tree searching. This is done by searching for a file at a directory object which is located at a lower hierarchical architecture (i.e. a lower directory structure) of the updated root directory. Rather than traversing the tree structure, the file is accessed directly from the hierarchically lower directory in which it resides.

Applicant further argues on page 13 that Tsutsui does not teach or suggest a DSI control message including a basic root directory and at least two directories at a lower hierarchical architecture of the root directory. While this is true, Examiner asserts that the updated history file of Christopher contains a basic root directory and at least two directories at a lower hierarchical architecture of the root directory (where the root directory is C:/, and the two directories at lower hierarchical architecture of the root directory are DIR1 and DIR2). In the combined system of Christopher and Tsutsui, the DSI contains this information.

Applicant argues on page 13 that the applied references do not disclose the absolute path claimed in claim 10. Examiner respectfully disagrees. As stated in the previous Office Action, Christopher discloses an absolute path that is present in the

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history file (and the DSI in the combined system of Christopher and Tsutsui). This absolute path is the directory in which the searched file resides; therefore it is an updated root directory - the first directory accessed in order to access the file. This updated root directory is located in a whole, lower hierarchical architecture (i.e. C:\DIR1\DIR2) of the basic root directory (C:\) (see Christopher col. 3 lines 1-13).

Regarding Applicant's argument on page 13 that the references do not teach "confirming whether or not information concerning a basic root directory of a DSI control message is updated . . . wherein the information includes the basic root directory object and at least two directories" Examiner respectfully disagrees. the updated history file of Christopher contains a basic root directory and at least two directories at a lower hierarchical architecture of the root directory (where the root directory is C:\, and the two directories at lower hierarchical architecture of the root directory are DIR1 and DIR2). In the combined system of Christopher and Tsutsui, the DSI contains this information.

Applicant argues on page 14 that the applied references do not teach that "the absolute path comprises at least two directory object paths to be skipped in searching the file object." Examiner respectfully disagrees. In Christopher, when a file located in C:\DIR1\DIR2 is searched, the directory objects C:\ and DIR1 are skipped (see col. 3 lines 1-13 and col. 4 lines 25-35). This information is contained in the absolute path.

Applicant argues on page 14 that the applied references do not teach "updating the DSI control message to include an absolute path for the file object . . ." because Christopher teaches updating a history file, not a DSI control message. Examiner again

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reminds Applicant that it is the combination of Christopher and Tsutsui that teaches this limitation, as has been discussed above.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-14, 17-19 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christopher, Jr. et al., US Patent No. 5,008,820, in view Tsutsui et al., US Patent No. 6,668,158.

As to claim 1, Christopher, Jr. et al. disclose a file searching method comprising the steps of: when a search object is requested, confirming whether or not a history is updated, an updated history including a basic root directory and at least two directories located at a lower hierarchical architecture of the root directory (col. 2 lines 25-35 – a history file is checked to see if information relevant to the file(s) being searched is present; col. 3 lines 1-13 – the updated history contains the location of a file which is located at C:\DIR1\DIR2, therefore the updated history contains a basic root directory and two sub-directories located at a lower hierarchical architecture); and

when the history is confirmed to have been updated, searching the file object from a directory object located at the lower hierarchical architecture of the updated root directory (col. 4 lines 25-35).

Christopher, Jr. et al. do not teach a data broadcasting system, nor do they teach a control message of a Download Server Initiate (DSI). However, Tsutsui et al. disclose client based handling of data that is broadcast and a DSI with root directory information in a broadcast stream (col. 10 lines 35-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the searching method and history updating of Christopher Jr. et al. with the data broadcast system and DSI of Tsutsui et al. The rationale for this combination would have been to more rapidly search files in a broadcast environment. This would have been obvious because the substitution of the search method of Christopher, Jr. et al. with the broadcast system of Tsutsui et al. would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 3, Christopher, Jr. et al. disclose the file searching method according to claim 1, wherein the step of confirming comprises: confirming that the history is not updated by confirming an absolute path is not written, and a basic root directory object is designated, in the history (col. 1 lines 45 - 2 lines 35 - if no information relative to the file is present, the search is performed from the root directory).

Christopher, Jr. et al. do not disclose a basic root directory object designated in the non-updated control message of the Download Server Initiate (DSI). However,

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Tsutsui et al. disclose designating the basic root directory in the non-updated DSI (col. 10 lines 35-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Christopher, Jr. et al. with those of Tsutsui et al. It would have been obvious to make this combination because the substitution of the DSI with root information, as disclosed by Tsutsui et al., for the history file of Christopher, Jr. et al. would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 4, Christopher, Jr. et al. disclose the file searching method according to claim 3, wherein the basic root directory object is a directory object located in a hierarchical architecture and used in an initial search for the file object (col. 1 lines 45-55, col. 2 lines 25-35 - if no information relative to the file is present, the search is performed from the root directory).

As to claim 5, Christopher, Jr. et al. disclose the file searching method according to claim 1, wherein the absolute path is written and the updated root directory object is designated in the history (col. 3 lines 59-61; col. 5 lines 17-19).

Christopher, Jr. et al. do not disclose a new root directory object being designated in the control message of the Download Server Initiate (DSI). However, Tsutsui et al. disclose designating root directory information in the DSI (col. 10 lines 35-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the updated history file of Christopher, Jr. et al. with the DSI of Tsutsui et al. The rationale for this combination would have been to use the file searching scheme of Christopher, Jr. et al. in a data broadcast environment, having the DSI take the place of the history file. It would have been obvious to make this combination because the substitution of the DSI with root information, as disclosed by Tsutsui et al., for the history file of Christopher, Jr. et al. would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 6, Christopher, Jr. et al. disclose the file searching method according to claim 5, wherein the updated root directory object is a directory object of a hierarchical architecture corresponding to the absolute path. (col. 5 lines 17-19).

As to claim 7, Christopher, Jr. et al. disclose the file searching method according to claim 5, wherein the absolute path comprises at least two hierarchically arranged directory object paths configured to enable skipping object paths while searching files (col. 3 lines 1-13; col. 4 lines 25-35 – the file being searched is located at C:\DIR1\DIR2, therefore it contains two hierarchically arranged directory object paths which are skipped in the locating of the file.).

As to claim 8, Christopher, Jr. et al. disclose the file searching method according to claim 1, further comprising: updating the history when the file object is initially

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searched (col. 3 lines 59-61; col. 5 lines 17-19 - entries are added when files are found and opened).

Christopher, Jr. et al. do not disclose a control message of the Download Server Initiate (DSI). However, Tsutsui et al. disclose a control message of a DSI with directory information (col. 10 lines 35-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the updated history file of Christopher, Jr. et al. for the DSI of Tsutsui et al. The rationale for this combination would have been to use the file searching scheme of Christopher, Jr. et al. in a data broadcast environment, having the DSI take the place of the history file. It would have been obvious to make this combination because the substitution of the history file of Christopher, Jr. et al. for the DSI with directory information, as disclosed by Tsutsui et al., would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 9, Christopher, Jr. et al. disclose the file searching method according to claim 8, the step of updating the history comprising: identifying the absolute path and the updated root directory object when the file object is initially searched (col. 3 lines 59-61; col. 5 lines 17-19 – entries are added when files are found).

Christopher, Jr. et al. do not disclose a control message of the Download Server Initiate (DSI). However, Tsutsui et al. disclose a control message of a DSI with directory information (col. 10 lines 35-47).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the updated history file of Christopher, Jr. et al. for the DSI of Tsutsui et al. The rationale for this combination would have been to use the file searching scheme of Christopher, Jr. et al. in a data broadcast environment, having the DSI take the place of the history file. It would have been obvious to make this combination because the substitution of the history file of Christopher, Jr. et al. for the DSI with directory information, as disclosed by Tsutsui et al., would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 10, Christopher, Jr. et al. disclose a file searching method, the method comprising the steps of: confirming whether or not an absolute path exists in a history file, in response to a search request for a file object (col. 2 lines 25-35; col. 3 lines 59-61 – if the information required is present it is used directly without the need for further tree searching); and

searching for the file object from an updated root directory object corresponding to the absolute path, when the absolute path is confirmed to exist (col. 4 lines 25-35),

wherein the absolute path represents a path for the updated root directory object existing in a whole hierarchical architecture of a basic root directory object designated by the history (Christopher col. 3 lines 1-13 – the path contains the location of the file - C:\DIR1\DIR2 – which is the updated root directory, located at a whole hierarchical architecture of the basic root directory C:\).

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Christopher, Jr. et al. do not disclose searching files in a data broadcasting system, nor do they teach a Download Server Initiate (DSI). However, Tsutsui et al. disclose client based handling of data that is broadcast and a DSI in a broadcast stream (col. 10 lines 35-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the searching method and history updating of Christopher Jr. et al. with the data broadcast system and DSI of Tsutsui et al. The rationale for this combination would have been to more rapidly search files in a broadcast environment. This would have been obvious because the substitution of the search method of Christopher, Jr. et al. with the broadcast system of Tsutsui et al. would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 11, Christopher, Jr. et al. disclose the file searching method according to claim 10, wherein the updated root directory object is a directory object of a hierarchical architecture corresponding to the absolute path (col. 5 lines 17-19).

As to claim 12, Christopher, Jr. et al. disclose the file searching method according to claim 10, wherein the absolute path comprises at least two directory object paths (col. 3 lines 59-61 - each time a file is found an entry is added to the history file, implying multiple paths exist).

As to claim 13, Christopher, Jr. et al. disclose the file searching method according to claim 10, further comprising: creating the absolute path when the file object is searched at least one time; and writing the absolute path in the history (col. 3 lines 59-61; col. 5 lines 17-19 - entries are added when files are found and opened).

Christopher, Jr. et al. do not disclose a control message of the Download Server Initiate (DSI). However, Tsutsui et al. disclose a control message of a DSI with directory information (col. 10 lines 35-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the updated history file of Christopher, Jr. et al. for the DSI of Tsutsui et al. The rationale for this combination would have been to use the file searching scheme of Christopher, Jr. et al. in a data broadcast environment, having the DSI take the place of the history file. It would have been obvious to make this combination because the substitution of the history file of Christopher, Jr. et al. for the DSI with directory information, as disclosed by Tsutsui et al., would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 15 see similar rejection of claim 1.

As to claim 17 Christopher discloses a file searching method, the method comprising the steps of:

receiving a first search request for a file object; searching for the file object from a basic root directory object of a history file in response to the first search request (col. 2

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lines 25-35; col. 4 lines 25-35; Fig. 2 – when a search is performed, the history file is examined. If no results are returned (i.e. the search has not been previously performed) the search begins at the root directory);

updating the history file by using at least one of an absolute path and an updated basic root directory object for the file object in response to said step of searching in response to the first search request (col. 3 lines 53-65; col. 4 lines 25-35);

receiving a second search request for the file object (col. 2 lines 25-35; col. 4 lines 25-35); and

searching for the file object by using the at least one of the absolute path and the updated basic root directory object, based on the updated history file (col. 2 lines 25-35; col. 4 lines 25-35),

wherein the absolute path comprises at least two directory object paths to be skipped in searching the file object (col. 3 lines 1-13; col. 4 lines 25-35 – the file being searched is located at C:\DIR1\DIR2, therefore it contains two hierarchically arranged directory object paths which are skipped in the locating of the file).

Christopher, Jr. et al. do not teach a data broadcasting system, nor do they teach a control message of a Download Server Initiate (DSI). However, Tsutsui et al. disclose client based handling of data that is broadcast and a DSI with root directory information in a broadcast stream (col. 10 lines 35-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the searching method and history updating of Christopher Jr. et al. with the data broadcast system and DSI of Tsutsui et al. The rationale for this

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combination would have been to more rapidly search files in a broadcast environment.

This would have been obvious because the substitution of the search method of Christopher, Jr. et al. with the broadcast system of Tsutsui et al. would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 18 see similar rejection to claim 17, where the combined system of Christopher and Tsutsui disclose updating the DSI with an absolute path for the file object after the first search is performed (Christopher col. 3 lines 53-65; col. 4 lines 25-35).

As to claim 19 the combined system of Christopher and Tsutsui disclose the method according to claim 18, wherein, the searching step comprises: skipping a directory object of a hierarchical architecture of the absolute path and directly accessing a directory object of the next hierarchical architecture of the absolute path when the directory object is written to the absolute path of the updated Download Server Initiate control message (Christopher col. 2 lines 25-35; col. 3 lines 1-13; col. 4 lines 25-35; col. 5 lines 17-19 – the file being searched is located at C:\DIR1\DIR2, therefore it contains two hierarchically arranged directory object paths which are skipped in the locating of the file).

As to claim 22 the combined system of Christopher and Tsutsui disclose the file searching method according to claim 10, wherein the step of searching comprises:

searching from a next directory object of the directory object corresponding to the absolute path (Christopher col. 4 lines 30-35; Fig. 2 – when the information for a file is only partially found, the search starts at the directory object found and continues tree searching at the next directory object).

As to claim 23 the combined system of Christopher and Tsutsui disclose the file searching method according to claim 10, wherein the step of searching comprises:

searching from the updated root directory object being a next hierarchical architecture of the absolute path (Christopher col. 4 lines 30-35; Fig. 2 – when the information for a file is only partially found, the search starts at the directory object found and continues tree searching at the next directory object).

As to claim 24 the combined system of Christopher and Tsutsui disclose the file searching method according to claim 10, wherein the step of searching comprises:

skipping the directory object corresponding to the absolute path (Christopher col. 2 lines 25-35; col. 3 lines 1-13; col. 4 lines 25-35; col. 5 lines 17-19 – the directory objects corresponding to the absolute path are C:\, DIR1 and DIR2 and the file is located in DIR2. These directory objects are skipped when searching the file).

As to claim 25 the combined system of Christopher and Tsutsui disclose the method according to claim 15, wherein the information concerning the basic root directory object comprises:

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a message indicating the basic root directory object and a message indicating an absolute path of a Download Server Initiate control message (Christopher col. 2 lines 25-35; col. 3 lines 1-13; col. 4 lines 25-35 – the absolute path contains information indicating the basic root directory C:\ and the absolute path C:\DIR1\DIR2).

As to claim 26 the combined system of Christopher and Tsutsui disclose the method according to claim 15, wherein the absolute path comprises:

at least two directory object paths, in which the absolute path makes at least two upper directory object paths in a hierarchical architecture of a basic root directory object skip in searching the file (Christopher col. 2 lines 25-35; col. 3 lines 1-13; col. 4 lines 25-35; col. 5 lines 17-19 – the directory objects corresponding to the absolute path are C:\, DIR1 and DIR2 and the file is located in DIR2. These directory objects are skipped when searching the file).

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christopher and Tsutsui as applied to claim 1 above, and further in view of Kitazato, US Patent No 6,966,065.

As to claim 2, the combined system of Christopher and Tsutsui disclose the file searching method according to claim 1, wherein the step of confirming comprises confirming whether or not a history is updated (Christopher col. 2 lines 25-35).

The combined system of Christopher and Tsutsui fail to disclose confirming based on version information of a Download Info Indication message.

However, in an analogous art, Kitazato disclose including version information in a DII (col. 25 lines 11-16).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of Christopher and Tsutsui with the teachings of Kitazato. The rationale for this modification would have been to provide a fast way to confirm that the DSI has been updated.

1. Claims 14, 16 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christopher and Tsutsui as applied to claims 1 and 15 above, and further in view of Applicant's Admitted Prior Art (AAPA).

As to claim 14 Christopher discloses confirming whether or not a history is updated in response to a search request for a file object (col. 2 lines 25-35 – a history file is checked to see if information relevant to the file(s) being searched is present).

Christopher, Jr. et al. do not a control message of a Download Server Initiate (DSI). However, Tsutsui et al. disclose client based handling of data that is broadcast and a DSI with root directory information in a broadcast stream (col. 10 lines 35-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the searching method and history updating of Christopher Jr. et al. with the data broadcast system and DSI of Tsutsui et al. The rationale for this

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combination would have been to more rapidly search files in a broadcast environment.

This would have been obvious because the substitution of the search method of Christopher, Jr. et al. with the broadcast system of Tsutsui et al. would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

The combined system of Christopher and Tsutsui fail to disclose confirming whether or not a single user area of a control message of the DSI is updated.

However, AAPA discloses placing the root directory object in a single user area of the control message of the DSI (Paragraph 35).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of Christopher and Tsutsui with the teachings of AAPA by placing the updated root directory in the user area of the control message of the DSI, and by confirming upon a search request that this user area is updated. The rationale for this modification would have been to place the updated root directory information in an alterable private data area, which would allow for variation of the search process without affecting other functions of the system.

As to claim 16 the combined system of Christopher and Tsutsui fail to disclose the method according to claim 15, wherein the information concerning the basic root directory object comprises a "ServiceGatewayInfo()" field of Download Server Initiate control message.

However, AAPA discloses information concerning basic root directory object comprising a ServiceGatewayInfo() field of a DSI (Paragraphs 35-36).

Therefore it would have been obvious to modify the combined system of Christopher and Tsutsui with the teachings of AAPA. The rationale for this modification would have been to place the root directory object in a standard location of the DSI control message, thereby simplifying the process of locating and traversing the directory structure.

As to claim 20 see similar rejection of claim 16.

As to claim 21 the combined system of Christopher and Tsutsui fail to disclose the file searching method according to claim 10, wherein the step of confirming comprises: confirming whether or not the absolute path exists is based on a serviceContext_data_byte of a Download Server Initiate control message.

However, AAPA discloses a serviceContextList_data_byte in a private area of a control message of a DSI (Fig. 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of Christopher and Tsutsui with the teachings of AAPA by placing the absolute path information in the serviceContextList_data_byte of the DSI. The rationale for this modification would have been to place the updated root directory information in an alterable private data area, which would allow for variation of the search process without affecting other functions of the system.

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HANCE whose telephone number is (571)270-5319. The examiner can normally be reached on M-F 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John W. Miller/
Supervisory Patent Examiner, Art Unit 2421

ROBERT HANCE
Examiner
Art Unit 2421

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Examiner, Art Unit 2421